

Claims

1. A device-to-device authentication system for authenticating a device on a home network connected to an external network via a router, characterized by comprising:
 - 5 path disconnection means for connecting/disconnecting a path between said external network and said home network; and local environment management means for making said path disconnection means operate to isolate said home network from said external network at timing ensuring communication between devices on said home network.
- 10 2. The device-to-device authentication system according to claim 1, characterized in that:
 - one of said devices is a home server for legitimately acquiring contents from said external network via said router, whereas the other of said devices is a client for making a request for said contents to said home server for use;
- 15 20 wherein while said home network is being isolated from said external network by said local environment management means, said home server provides said contents and/or issues a license for said contents to said client.
- 25 3. The device-to-device authentication system according to claim 1, characterized in that:
 - two or more home servers are able to be installed on said home network;
- 30 wherein said local environment means temporarily disconnects said path between said home network and said external network when providing said contents and/or issuing

a license for said contents to said client for each of home server.

4. The device-to-device authentication system according
5 to claim 3, characterized in that:

 said client is able to receive provision of said contents and/or issuance of said license for said contents.

5. The device-to-device authentication system according
10 to claim 3, characterized in that:

 said client is able to use contents acquired from a plurality of home servers on said same home network, and, upon connection to a home server on an other home network, said client is not able to use contents acquired from said home
15 servers on said home networks other than said other home network.

6. The device-to-device authentication system according to claim 1, characterized in that:

20 after completion of local communication on said home network, or after elapse of a predetermined time from a start of local communication, said local environment management means reestablishes said path between said home network and said external network.

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7. A device-to-device authentication method for authenticating a device on a home network connected to an external network via a router, characterized in that:

 a path between said external network and said home network
30 is temporarily disconnected so as to isolate said home network from said external network at timing ensuring communication

between devices on said home network.

8. The device-to-device authentication method according to claim 7, characterized in that:

5 one of said devices is a home server for legitimately acquiring contents from said external network via said router, whereas the other of said device is a client for making a request for said contents to said home server for use;

10 wherein while said home network is being isolated from said external network by said local environment management means, said home server provides said contents and/or issues a license for said contents to said client.

9. The device-to-device authentication system according to claim 7, characterized in that:

two or more home servers are able to be installed on said home network,

15 wherein said local environment means disconnects a path between said home network and said external network temporarily 20 disconnected a path between said home network and said external network when providing said contents and/or issuing a license for said contents to said client for each of home server.

10. The device-to-device authentication system according to claim 9, characterized in that:

25 said client is able to receive provision of said contents and/or issuance of said license for said contents.

11. The device-to-device authentication method according to claim 9, characterized in that:

30 said client is able to use said contents acquired from

a plurality of home servers on said same home network, and, upon connection to a home server on an other home network, said client is not able to use contents acquired from said home servers on said home networks other than said other home
5 network.

12. The device-to-device authentication system according to claim 7, characterized in that:

10 after completion of local communication on said home network, or after elapse of a predetermined time from a start of local communication, said local environment management means reestablishes said path between said home network and said external network.

15 13. A communication apparatus operating on a home network connected to an external network via a router, characterized by comprising:

20 local environment management means for requesting disconnection to isolate said home network from said external network at timing ensuring communication between said devices on said home network.

14. The communication apparatus according to claim 13, characterized in that:

25 said communication apparatus operates on a home network as a home server for providing contents;

wherein said local environment management means requests disconnection to isolate said home network from said external network when providing said contents and/or issuing
30 a license for said contents to said client.

15. The communication apparatus according to claim 14, characterized in that:

5 said local environment management means requests reestablishment connection between said home network and said external network after completion of local communication with said client.

16. A communication apparatus interconnecting a home network and an external network, characterized by comprising:

10 path disconnection means for connecting/disconnecting a path between said external network and said home network; and

15 control means for isolating said home network from said external network by making said path disconnection means operate at timing ensuring communication between devices on said home network.

17. The communication apparatus according to claim 16, characterized in that:

20 said control means isolates said home network from said external network in response to a disconnection request from said home server providing contents on said home network.

25 18. The communication apparatus according to claim 16, characterized in that:

30 said control means reestablishes said connection between said home network being disconnected and said external network in response to a reestablishment request from said home server providing contents on said home network.

19. The communication apparatus according to claim 16,

characterized in that:

5 said control means reestablishes said connection between said home network and said external network at predetermined timing after isolating said home network from said external network in response to a disconnecting request from said home server providing contents on said home network.

20. The communication apparatus according to claim 16, characterized by further comprising:

10 means for communicating with said external network during said home network and said external network are being disconnected; and

15 means for confirming disconnection of said path between said home network and said external network by accessing to a predetermined server on said external network during a period when said home network and said external network are being disconnected.

21. A computer program described in a computer-readable format so as to execute a process for authenticating a device on a home network connected to an external network via a router, characterized by comprising:

20 a step of acquiring timing for ensuring communication between devices on said home network; and

25 a step of temporarily disconnecting a path between said external network and said home network at said acquiring timing so as to isolate said home network from said external network.